AMENDMENTS TO THE CLAIMS:

The claims are not herewith amended, and are provided below simply for the convenience of the Examiner.

Claims 2, 4, 6, 8, 9 and 11-33 were previously canceled without prejudice or disclaimer.

Listing of Claims:

1. (Previously Presented) A method to manage addresses in a network, comprising:

when connecting a mobile router (MR) of a mobile network (MONET) to an access point (AP) of an access network (AN) that includes an Access Router (AR), sending a first neighbor advertisement from a mobile network node (MNN) to the MR, the first neighbor advertisement comprising a care of address (CoA) and a link layer address (LLA) of the MNN within the MONET;

based on the first neighbor advertisement, constructing a first neighbor cache in the MR that associates the CoA with the LLA;

sending a second neighbor advertisement from the MR to the AN on behalf of the MNN, the second neighbor advertisement comprising a mapping between the CoA of the MNN and a LLA of the MR (LLA_MR);

based on the second neighbor advertisement, constructing a second neighbor cache in the AR that associates the CoA with the LLA_MR;

in response to an arrival at the AR of a downlink packet having a CoA in an IP layer destination address field, checking, by the AR, the second neighbor cache using the CoA to obtain the associated LLA_MR of the MR;

transmitting the packet from the AR to the MR using the LLA_MR in a link layer destination address field;

in response to the arrival at the MR of the packet, checking, by the MR, the first neighbor cache using the CoA in the IP layer destination address field to obtain the associated LLA of the MNN; and

transmitting the packet from the MR to the MNN using the obtained LLA in the link layer destination address field.

2. (Canceled)

3. (Previously Presented) A method as in claim 1, where the LLA_MR comprises one LLA of a set of LLAs of the MR (LLA_MRi).

4. (Canceled)

5. (Previously Presented) A method to manage addresses in a network, comprising:

when connecting a mobile router (MR) of a mobile network (MONET) to an access point (AP) of an access network (AN) that includes an Access Router (AR), sending a first neighbor advertisement from a mobile network node (MNN) to the MR, the first neighbor advertisement comprising a care of address (CoA) and a link layer address (LLA) of the MNN within the MONET;

based on the first neighbor advertisement, constructing a mapping table in the MR that associates the LLA of the MNN with one of a set of LLAs of the MR (LLA_MRi);

sending a second neighbor advertisement from the MR to the AN on behalf of the MNN, the second neighbor advertisement comprising a mapping between the CoA of the MNN and the

LLA_MRi;

based on the second neighbor advertisement, constructing a neighbor cache in the AR that associates the CoA with the LLA_MRi;

in response to an arrival at the AR of a downlink packet having a CoA in an IP layer destination address field, checking, by the AR, the neighbor cache using the CoA to obtain the associated LLA_MRi of the MR;

transmitting the packet from the AR to the MR using the LLA_MRi in a link layer destination address field;

in response to the arrival at the MR of the packet, checking, by the MR, the mapping table using the LLA_MRi in the link layer destination address field to obtain the associated LLA of the MNN; and

transmitting the packet from the MR to the MNN using the obtained LLA in the link layer destination address field.

6. (Canceled)

7. (Previously Presented) A system to manage addresses in a network, comprising a mobile network (MONET) having a mobile router (MR) and at least one Mobile Network Node (MNN), said Monet being connectable via the MR to an access point (AP) of an access network (AN) that comprises an Access Router (AR), where a data processor of the MNN is responsive to the MR connecting to the AP to send to the MR a first neighbor advertisement that comprises a care of address (CoA) and a link layer address (LLA) of the MNN within the MONET; where a data processor of the MR, responsive to the first neighbor advertisement, constructs a first neighbor cache that associates the CoA with the LLA and sends a second neighbor advertisement from the MR to the AN on behalf of the MNN, the second neighbor advertisement comprising a mapping

between the CoA of the MNN and a LLA of the MR (LLA_MR); and where a data processor of the AR, responsive to the second neighbor advertisement, constructs a second neighbor cache that associates the CoA with the LLA_MR, where said AR data processor is further responsive to an arrival at the AR of a downlink packet having a CoA in an IP layer destination address field to check the second neighbor cache using the CoA to obtain the associated LLA_MR of the MR and to transmit the packet from the AR to the MR using the LLA_MR in a link layer destination address field; where said MR data processor is further responsive to the arrival of the packet at the MR to check the first neighbor cache using the CoA in the IP layer destination address field to obtain the associated LLA of the MNN to transmit the packet from the MR to the MNN using the obtained LLA in the link layer destination address field.

8. (Canceled)

9. (Canceled)

10. (Previously Presented) A system as in claim 7, where the LLA_MR comprises one of a set of LLAs of the MR (LLA_MRi).

11-33. (Canceled)